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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BOMAR, THOMAS S	

ART UNIT	PAPER NUMBER
3672	

MAIL DATE	DELIVERY MODE
08/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/758,309	KRUEGER, VOLKER	
	Examiner	Art Unit	
	Shane Bomar	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-27* is/are pending in the application.

4a) Of the above claim(s) *3,14 and 22-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,6-13,15-21,26 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 13, 2007 has been entered.

Election/Restrictions

2. This application contains claims directed to the following patentably distinct species:

a. Species I - embodied by Figures 2-4A wherein the first and second stabilizers have at least one adjustable rib.

b. Species II - embodied by Figures 5A-5D wherein the first stabilizer has independently adjustable ribs and the second stabilizer is a fixed stabilizer.

The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 6-10, 13, 16-19, 21, and 27 are generic.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g.,

searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected species**, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

3. During a telephone conversation with Chandran Kumar on August 1, 2007 a provisional election was made with traverse to prosecute the invention of Species I, claims 2, 4, 11, 12, 15, 20, and 26. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3 and 14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. It is also noted that claims 22-25 remain withdrawn per the previous restriction requirement mailed August 1, 2006.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

5. Claims 1, 2, 4, 6, 8, 11, 12, 21, 26, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,213,226 to Eppink et al.

Regarding claims 1 and 2: Eppink et al disclose a method of drilling a wellbore that involves the following steps:

- Conveying a drilling assembly **270** in the wellbore, said drilling assembly including a first adjustable stabilizer **278** having independently adjustable ribs and a second stabilizer **276** including a plurality of independently adjustable ribs having an undergage outer diameter (Figs. 36 and 39; 22:9-16).
- Engaging a wellbore wall using at least one of the plurality of ribs of the second stabilizer, said wellbore having a centerline along the drilling assembly (Figs. 36, 37, and 39).

- Applying a force on the wellbore using the first stabilizer to adjust a position of a first center of said first adjustable stabilizer in the wellbore relative to a second center of said second stabilizer and with respect to the centerline of the wellbore to drill the wellbore along a desired wellbore trajectory (see Figs. 34-39 and associated description; figs. 47-48; 16:19-21 and 22:56-65).

Regarding claim 4: The independently adjustable ribs of the second adjustable stabilizer in claim 2 also apply a force on the wellbore to adjust a position of a first center of said first adjustable stabilizer in the wellbore relative to a second center of said second stabilizer and with respect to the centerline of the wellbore (Fig. 35 and 22:56-65).

Regarding claim 6: The second stabilizer has no wall contact on an upper portion and has wall contact at the lower portion (Figs. 36 and 39).

Regarding claim 8: The method further involves drilling said wellbore along a predetermined well path (1:5-10).

Regarding claims 11 and 12: The method further involves adjusting the force applied by one of the first and second stabilizers based at least in part on a pre-selected wellbore trajectory (see Fig. 39).

Regarding claim 21: Eppink et al disclose a method for controlling drilling direction in a wellbore comprising: (a) drilling the wellbore with a drilling assembly including a drill bit rotated by a drilling motor, a first adjustable stabilizer and a second stabilizer having an undergage outer diameter (Figs. 36 and 39); and (b) controlling a drilling direction of the drill bit by adjusting a position of a first center of said first adjustable stabilizer relative to a second center of said second stabilizer and with respect to a wellbore centerline along the drilling assembly while at least a portion of the second stabilizer engages a wellbore wall (see Figs. 35-39).

Regarding claim 26: The second stabilizer has a set of ribs containing a plurality of independently controllable ribs **40/42** to control drilling direction (16:19-21 and 22:56-65).

Regarding claim 27: The drilling assembly includes a drill bit that is rotated by a drilling motor and wherein the first stabilizer is on a portion of the motor (22:6-11).

Claim Rejections - 35 USC § 103

6. Claims 7, 9, 10, 13, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eppink et al in view of US 5,220,963 to Patton.

Regarding claims 7, 9, 10, 13, 15, and 17-19: Eppink et al disclose a system for controlling a trajectory of a wellbore. The system includes the following features:

- A drilling assembly **270** deployed in said wellbore by a rotatable tubular member, said drilling assembly including a drill bit at an end thereof that is rotatable by a drilling motor (22:62-65) carried by the drilling assembly, said wellbore having a centerline along the assembly.
- A first adjustable stabilizer **278** disposed in said drilling assembly having a first set of ribs **40/42** spaced around said first adjustable stabilizer, with each rib being independently radially extendable (figs. 47-48; 22:56-65 and 16:19-21).
- A second stabilizer **276** including a plurality of independently radially extendable ribs **40/42** spaced apart from said first adjustable stabilizer.
- A controller in the drilling assembly adjusting the position of a first center of the first adjustable stabilizer in the wellbore relative to a second center of the second stabilizer in the wellbore while the second stabilizer engages a wellbore wall, wherein the position of the first center relative to the second center is determined at least in part based upon a desired wellbore trajectory (see Figs. 34-39 and 16:50-63).

However, it is not specifically taught that the method or system includes a sensor for measuring inclination or determining a parameter indicative of direction of drilling of said wellbore so that drilling direction of said wellbore can be altered if said parameter is outside a

predetermined limit, or that the desired wellbore trajectory is stored in the memory of the controller.

Patton teaches a method and system for controlling the trajectory of a wellbore similar to that of Eppink et al. It is further taught that the method or system includes a sensor for measuring inclination and/or for determining a parameter indicative of direction of drilling of said wellbore so that drilling direction of said wellbore can be altered if said parameter is outside a predetermined limit (21:40-24:36). It would have been obvious to one of ordinary skill in the art, having the teachings of Eppink et al and Patton before him at the time the invention was made, to modify the method and system taught by Eppink et al to include the memory, sensors, and methods of measuring of Patton, in order to obtain a calculated drill profile (23:3-19 of Patton). One would have been motivated to make such a combination since Eppink et al is silent to the directional control system electronics and sensors, although one of ordinary skill in the art knows that the directional drilling could not be accomplished without some sort of sensors to determine inclination and direction of the downhole components, which Patton have shown to be notoriously known.

Regarding claim 16: The second stabilizer has an undergage outer diameter to provide no wall contact on an upper portion and wall contact at the lower portion (Figs. 36 and 39 of Eppink).

Regarding claim 20: The position of the second stabilizer is adjusted by changing the extension of the at least one independently extendable rib (see Fig. 39 of Eppink).

Response to Arguments

7. Applicant's arguments filed July 13, 2007 have been fully considered but they are not persuasive. The Applicant appears to be explicitly relying on the teachings of embodiments not relied upon by the Examiner. Specifically, the Applicant relies upon the fact that Figures 19, 21, 22, 24, and 26 of Eppink do not show the fixed blade stabilizer contacting a wellbore wall, or that the second adjustable stabilizer expands to an undergage outer diameter. While this may in fact be true for those specific embodiments, the Examiner has relied upon the teachings in the embodiment of Figures 35-39; wherein Figure 39 clearly shows that the second stabilizer is undergage when expanded and Figure 37 shows the stabilizer touching the interior of the wellbore wall 220. Therefore, it appears that the Applicant's arguments are effectively moot since they rely on an embodiment not used in the previous rejections of the claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/*Shane Bomar*/
Patent Examiner.
Art Unit 3672

August 1, 2007